

31 January 1972

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Regards,

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Project Engineer
Advanced Development Projects

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SP-1811
Copy No. 4

SR -71
PROVIDING A TURN CAPABILITY
TO PERSONNEL PARACHUTE

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*Lockheed Aircraft Corporation***ADVANCED DEVELOPMENT PROJECTS**
BURBANK, CALIFORNIAREPORT NO. 8 SP-1811
DATE 11 Nov. 1971
COPY NO. 8**MODEL** SR-71**TITLE**PROVIDING A TURN CAPABILITY TO
PERSONNEL PARACHUTE

PREPARED BY

G. L. Roberts
G. L. RobertsR. D. Drew
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R. L. MillerJ. R. Danfell
J. R. Danfell

APPROVED BY

Clarence L. Johnson
Clarence L. Johnson

Senior Vice President

Advanced Development Projects

REVISIONS

DATE

PAGES AFFECTED

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LIST OF FIGURES

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FIGURE 1-4	TEST JUMPER DESCENT - 6 LINES RELEASED
FIGURE 1-5	PARACHUTE

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SERIAL 1000100080012-0

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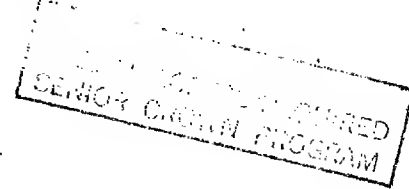
ABSTRACT

This report describes the modification to, and the tests of, the air crew parachutes, the objective of which was to provide a crew initiated and controlled turn (steering) capability during a descent.

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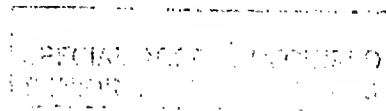
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INTRODUCTION

The personnel parachutes used on the SR-71 are not standard USAF personnel parachutes. The standard chutes are smaller and flatter and are capable of being turned during descent. The turning technique requires the release of four of the suspension lines from the canopy to the risers attached to the crewman's harness. Following this, the crewman, by chinning himself on one of the four risers, can cause the canopy to turn and thus can control his heading and, therefore, to some extent control his landing point to avoid obstructions.

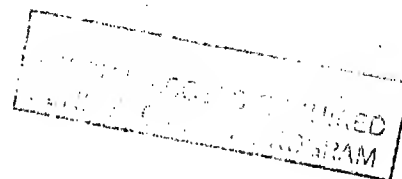
This report describes the attempt to provide a similar feature to the larger diameter and extended skirt canopy parachute used by the SR-71 air crew.



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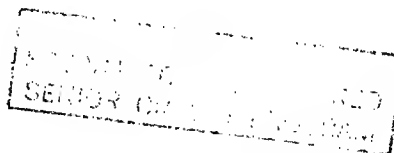
CONCLUSION



The intent of providing turn capability to the SR-71 parachute is to increase an air crewman's chances for survival.

However, fast reaction and high physical strength are required for successful use of the six line release method on the SR-71 parachute system. These requirements could not be met even with our extremely rigorous training programs. Also incorporating this technique will increase the complexity of parachute packing.

Therefore, it is concluded that this technique actually detracts from an air crewman's ability to survive and it is not recommended that it be incorporated in the SR-71 parachute system.



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DESCRIPTION OF MODIFICATION

An examination of Figure 1-5 will disclose the important anatomical features of the SR-71 air crew parachute when fully deployed. Following tests described in other sections of this report, it was determined that the optimum number of suspension lines to be released was six; three lines from each aft riser to the canopy.

Figure 1-1 gives an overall close-up of the risers and the modification to the aft risers to incorporate release lines to effect the release of the three suspension lines mentioned above.

Figure 1-2 is a more detailed close-up of the upper portion of one of the release lines and its attachment to the "D" ring to which the suspension lines from the canopy are attached.

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STATIC TESTS

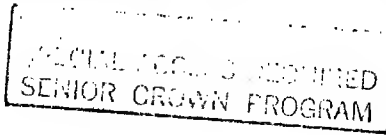
The purpose of the static tests was to determine the static strength of the suspension lines with and without the modification of adding the release line shown in Figure 1-2.

As shown in Figure 1-2 three of the eight suspension lines to the "D" ring were modified for these tests. Also full length suspension lines were used.

An examination of the following table of test results shows that the modification did not degrade the strength of the system.

<u>Sample No.</u>	<u>Type</u>	<u>Failure Load Lbs.</u>
1	Standard	3200
2	Modified	3250
3	Modified	3500
4	Modified	3000
5	Standard	3250
6	Standard	3250
7	Standard	3250
8	Standard	3250
9	Standard	3250
10	Modified	3500
11	Modified	3000

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WHIRL TOWER TESTS

The purpose of the whirl tower tests was (1) to test the pull force required on the release line to release the three suspension lines under simulated dynamic conditions and (2) to verify the structural integrity of the parachute lines and risers under simulated dynamic conditions.

- (1) Three tests using 300 lb. dummies were run at 170 KIAS to check pull forces required to release the three suspension lines. The results were as tabulated:

<u>Test No.</u>	<u>Pull Force Lbs.</u>	
1	L. H. 40	R. H. 50
2	L. H. 45	R. H. 35
3	L. H. 60	R. H. 60

- (2) A series of tests were run at various KIAS to verify structural integrity. The three tests at 170 KIAS reported above demonstrated the structural adequacy of the system at that KIAS.

Three tests were run at 300 KIAS with 300 lb. dummy and with a Navy test harness. In the first test, the "D" ring on the harness pulled out when the chute was approximately 3/4 open. In the second test, the neck ring on the dummy came away when the chute was approximately 3/4 open. In the third test there was no camera coverage and therefore no record of the sequence of failure. In all three of these tests the dummy separated from the chute. The release line modification was

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unaffected in all three tests.

An additional two tests were run at 225 KIAS and 250 KIAS
respectively with complete success.

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AIRPLANE DUMMY DROP TESTS

The purpose for making drop tests with dummies from airplanes was to discover the optimum number of suspension lines to be released to render the parachute capable of being turned (steered) by the air crewman.

These tests were performed with a 300 lb. dummy being dropped from a C-130 at 10,000 feet altitude and at 110 - 125 KIAS.

The SR-71 parachute has seven (7) suspension lines on each of the two rear risers (see Figure 1-2) and eight (8) suspension lines on each of the two front risers.

The first drop tests determined the maximum number of suspension lines that could be released on the rear risers before the canopy collapsed. The canopy deployed stably with a total of eight lines released (four on each side). However, when 10 lines were released (five on each side) the canopy would alternately fill and collapse at approximately 50 foot intervals. This established that the maximum number of lines released per rear riser should not exceed three (3) per side in order to provide the required safety for live jumps.

It was further determined that for proper stability in terms of canopy action, that no more than three lines per riser should be released. Therefore, the optimum number of lines to be released to effect turn control of the chute during descent should be three per rear riser for a total of six.

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LIVE JUMP TESTS

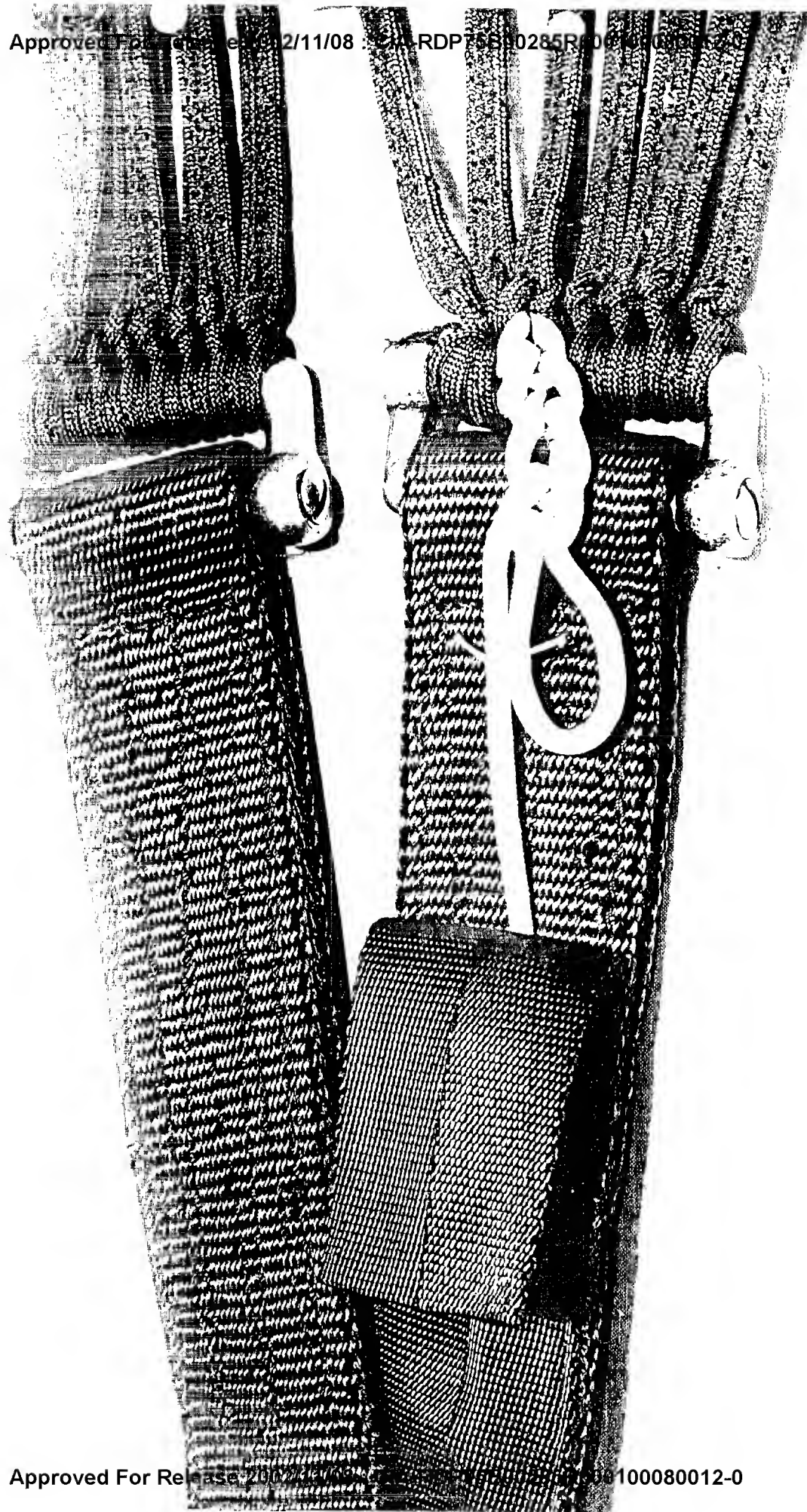
The purpose of these tests was to evaluate the feasibility of the air crewman turning (steering) the parachute during descent.

The live jumps were made from a C-130 flying at 10,000 feet altitude and 110 - 125 KIAS. The first nine jumps were with "shirt sleeve" equipment to acquaint the men with the parachutes and other SR-71 equipment and the suspension line release. The other nine jumps were made with the men wearing full pressure suits. The technique of suspension line release used was to release three of the seven lines on each of the rear risers in consecutive order after the canopy opened (Figures 1-3, 1-4 and 1-5).

To summarize the written statements of the jumpers which are duplicated in the appendix:

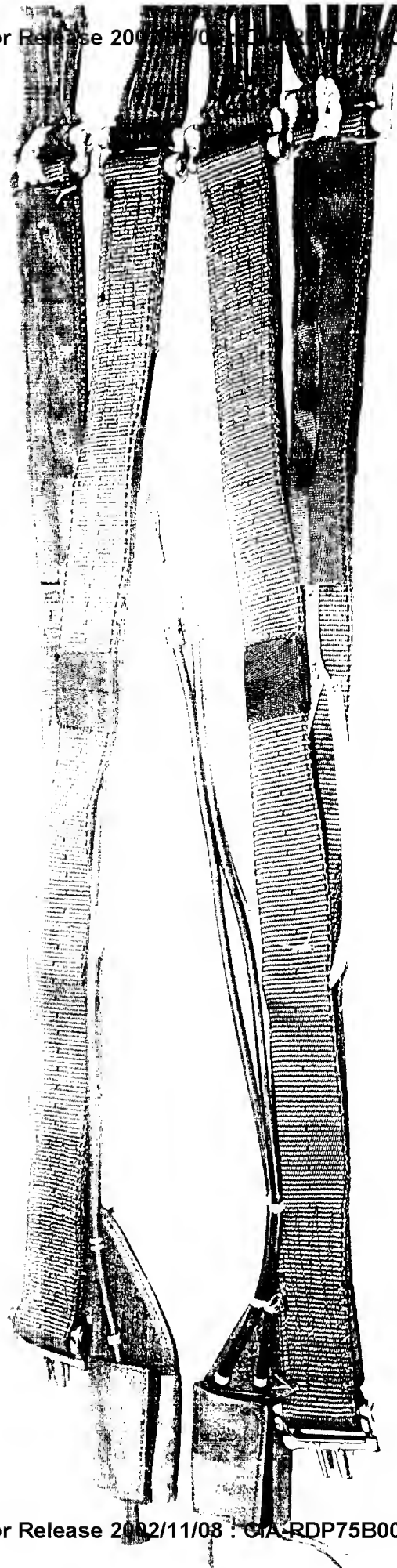
The jumpers reported that it required approximately 30 seconds to make 360° turns with the six suspension lines released. Holding down a front riser to effect the turn was exhausting effort. The descent rate was unaffected by the release of the six suspension lines, remaining approximately 20 feet per second. Also a constant turning factor was introduced after line release which demanded continuous physical effort to overcome. The down wind velocity was increased by four knots at a ground wind velocity of eight knots.

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ENVELOPE # 8158-2

FIG. NO. 31896

DATE SHOT 8-5-71

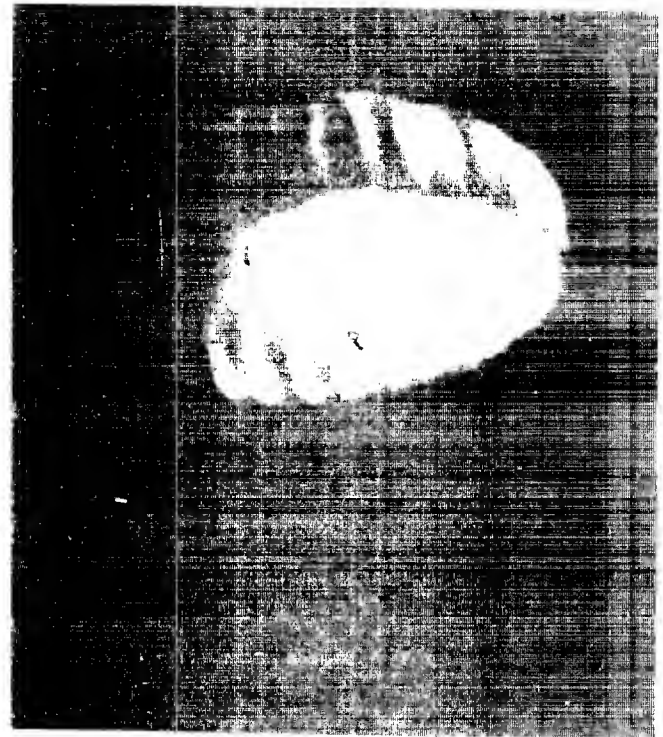
DATE REPRINTED 12-21-71

ORDERED BY

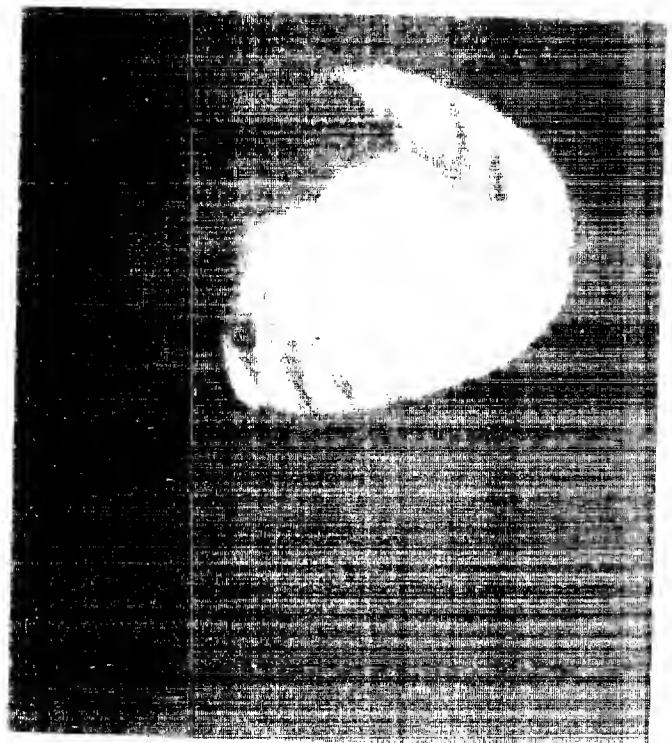


STAT

FILE 1
CROSS-SECTIONAL
LEADER RELEASED



1ST JUMPER DESCENT
BEFORE AFT RISER LINES RELEASED.)

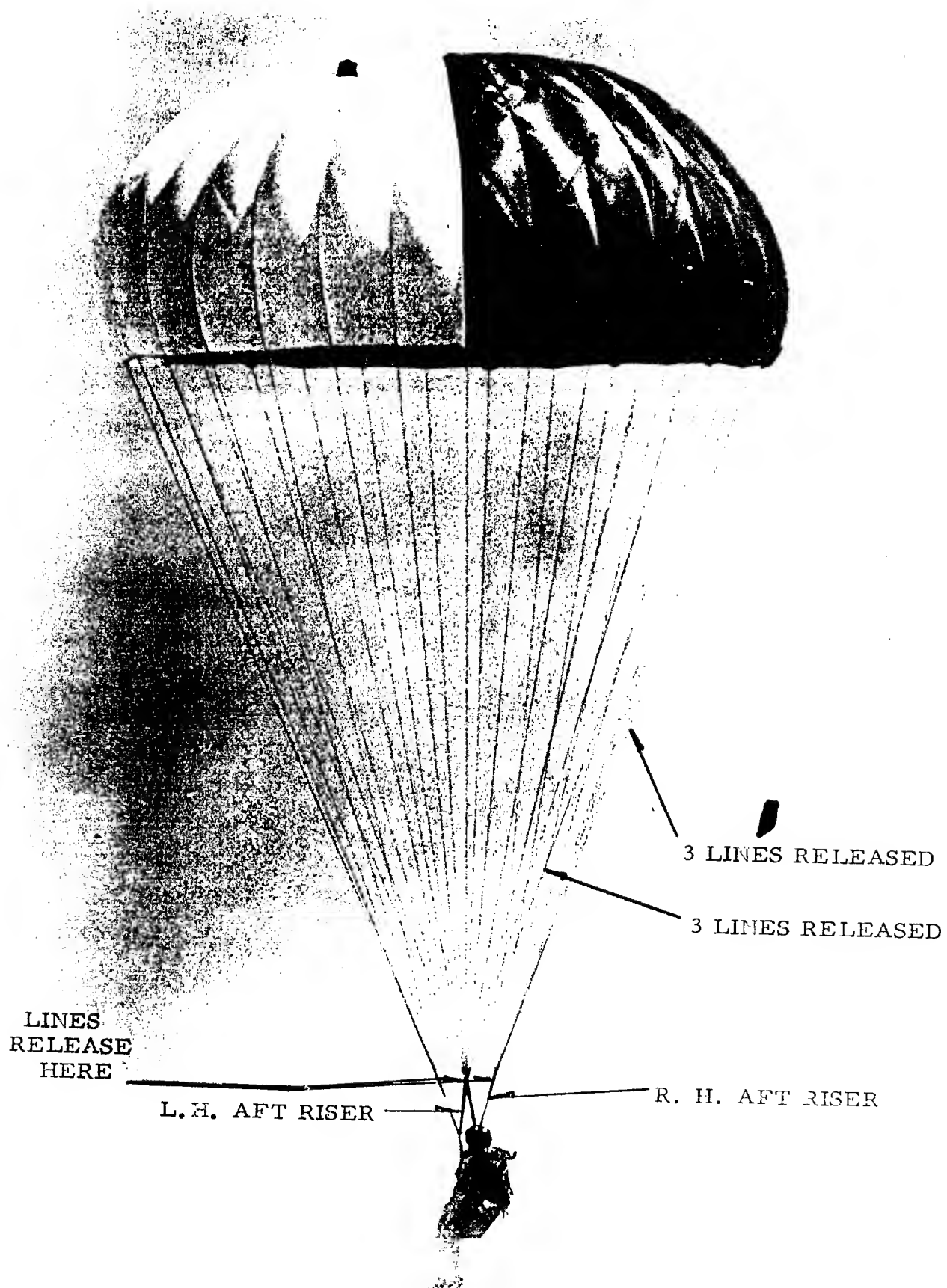


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TEST JUMPER DESCENT
(COPIES OF AFT RISER RELEASED)





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APPENDIX

Live Jump Test Reports

<u>Name</u>	<u>Date</u>
Simpkins, Jimmie C.	9 June 1971
	11 June 1971
	30 June 1971
	2 July 1971
Alexander, Guillermo M.	4 June 1971
	11 June 1971
	2 July 1971
	8 July 1971
Nye, James W.	9 June 1971
	11 June 1971
	8 July 1971
Sallee, Jettie L.	4 June 1971
	9 June 1971
	30 June 1971
	2 July 1971
Brown, Herbert R.	30 June 1971
	8 July 1971
Powers, William E. Jr.	4 June 1971

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Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

LAST NAME - FIRST NAME - MIDDLE INITIAL SIMPKINS, JIMMIE C.		GRADE CAPTAIN SPECIAL ACCESS REQUIRED SENIOR CROWN PROGRAM		SERIAL NUMBER <div style="border: 1px solid black; width: 100px; height: 20px;"></div>	STAT
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 26' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER			
PARACHUTE PART NR UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA			
RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY		TWIST IN LINES <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO NR OF FULL TWISTS <u>4</u>	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

Project Number JON 134ADO Altitude 10,000 Delay 5 Second (uncontrolled free-fall) Speed 125 KIAS, Aircraft C-130/358. Upon exit from the aircraft the weight of the seat kit caused the jumper to have an unstable condition. Approximately 5 seconds off ramp the jumper pulled the ripcord with no problems (easy pull). Release of seat kit was accomplished with no problem. Turning of the main canopy with no lines released had negative results. Upon release of the left group of lines with a vigorous jerk the canopy seemed to gain more oscillation. Turning with the left three lines released was very slow, however, a 180° turn was accomplished in approximately 30 seconds. The right group of lines were released with a slow pull and released with very limited pressure. Turning with all six lines released was very slow. Approximately 180° in 30 seconds. The seat kits swinging movement under the jumper appeared to nullify all turns. Forward drift can be increased slightly by a front riser pulled all the way down to chest level.

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Easy Landing

SIGNATURE

JIMMIE C. SIMPKINS, CPT, USA

AEFTC

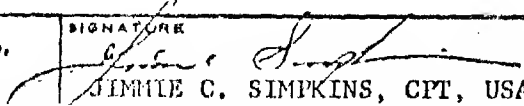
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INDIVIDUAL LIVE JUMP REPORT

11 June 1971

LAST NAME - FIRST NAME - MIDDLE INITIAL SIMPKINS, JIMMIE C.		GRADE CAPTAIN FOR OFF	SERIAL NUMBER [REDACTED]	STAT
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER		
PARACHUTE PART IN UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY		
RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____		
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
REMARKS Test Program JON 134ADO - C-130 Aircraft - 125 KIAS Jumper departed aircraft in regular airborne position. Delayed approximately 3-5 seconds and pulled the ripcord. No problem; easy pull. Release of the seat kit was accomplished with a straight up pull. No problems. Several attempts were made to turn the canopy with no lines released (negative results). The right three lines were released with a jerking motion. No problems. The left three lines were released with a slow easy pull. No problems. The seat kit raft was swinging to the right side of the jumper so the left front riser was pulled to chest level for approximately 1 minute. The canopy made two 360° turns to the left. Turns using rear one riser slips were much less approximately one 360° turn in 80 seconds. The seat kit raft appears to swing more in a front to rear motion vs turning to a right or left pattern. Canopy has good stability with very minor oscillations.				
SPECIAL ACCESS REQUIRED JON 134ADO PROGRAM				
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AFMTC FORM L-C-16
MAY 66

REPLACES 6611TH TEST GROUP (P) FORM 15, 4 FEB 67, WHICH IS OBSOLETE.

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Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0		DATE	
LAST NAME • FIRST NAME • MIDDLE INITIAL		GRADE	
SIMPKINS, JIMMIE C.		CPT	
PARACHUTE TYPE		SERIAL NUMBER	
<input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		<input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT	
PARACHUTE PART NR		STAT	
UNUSUAL OCCURRENCE		FOR OFFICIAL USE ONLY	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY NR OF FULL TWISTS <u>None</u>	
RESERVE PARACHUTE DATA		COMPLETE INVERSION	
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
UNUSUAL OCCURRENCE		INJURIES	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
REMARKS			
<p>Project JON 134ADO - C-130 - Altitude 10,000 - Delay - 3 sec. The jumper exited the A/C (airborne position) and delayed for approximately 3 sec. The ripcord was pulled and immediate canopy inflation occurred. No problems. The jumper could check his canopy with no problems. The jumper tried to turn the canopy with no lines released and got no response. Approximately 30 seconds after exit the six lines were released with a sharp jerking movement. No problems. 360° turns were made with the left front riser pulled to shoulder level. Average turn time was 35 sec. The tabs provided for pulling the risers down were approximately 6" too high. The seat being with the jumper at this time seemed to increase oscillation. The seat kit was released at 4,000 ft. No problems. Turns attempted from this time to ground impact were approximately 90° due to the jumper being exhausted. The pressure suit is very comfortable and remained cool almost to impact. During the 360° turns the canopy seemed to turn in approximately 45° jerking movements.</p>			
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		JIMMIE C. SIMPKINS, CPT, USA	

SP-1811

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INDIVIDUAL LIVE JUMP REPORT		DATE
JIM NAME - FIRST NAME - MIDDLE INITIAL		12 July 1971
SIMPKINS, JIMMIE C.		STAT
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 20' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER
PARACHUTE PART NR UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY
RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

REMARKS

Project - JON 134ADO - Altitude 10,000 ft - Speed 125 KIAS. The jumper exited the aircraft in an airborne position and delayed for 3-5 seconds. The ripcord pull was easy; however, the ripcord was hard to see from the helmet. The jumper released the 6 lines with no problems. 360° turns were accomplished by use of the left front riser. Approximate time was 30 seconds per 360°. The jumper around 6000 ft set a heading for the bull's eye on the drop zone and was able by pulling on the right front riser and then the left front to hold the heading for approximately 2000 ft. The seat kit was released at 4000 ft. No problems. Turns attempted with the canopy after seat release were minimum due to seat kit revolutions below the jumper and also the jumper's strength was exhausted. The pressure suit was comfortable. No problems were encountered in this test.

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DATE

SERIAL NUMBER

LAST NAME - FIRST NAME - MIDDLE INITIAL

GRADE

ALEXANDER, GUILLERMO M.

1ST LT

PARACHUTE TYPE

☒ BACK☐ SEAT☐ CHEST☐ TROOP

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☐ YES☒ NO

RESERVE PARACHUTE DATA

USED

☐ YES☒ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

MAIN CANOPY TYPE

☐ 28' STANDARD FLAT☒ 30' PERSONNEL☐ T-10

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☒ OTHER

STAT

MAIN CANOPY DATA

DAMAGE

☐ NONE☐ MEDIUM☐ LIGHT☐ HEAVY

TWIST IN LINES

☒ YES☐ NO

NR OF FULL TWISTS

SEMI-INVERSION

☐ YES☐ NO

COMPLETE INVERSION

☐ YES☐ NO

SQUIDDING CANOPY

☐ YES☐ NO

INJURIES

☐ YES☐ NO

REMARKS

The system fits well and is comfortable, upon exit I reached for the ripcord and deployed the canopy, the opening shock was light. Turning the canopy with out the 6 line release is useless, after deploying the bit I released the 6 lines and tried to turn the canopy by pulling on the rear risers, the response was poor about 30° per minute. The front risers were much better but still poor. The forward drift was about 4 knts. The canopy did not oscillate after the 6 line release. The risers are hard to pull, you have to reach for the connector link and pull it down to your chest to get a fair turn. I was tired when I reached the ground.

1 This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

Guillermo M. Alexander

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LAST NAME • FIRST NAME • MIDDLE INITIAL ALEXANDER, GUILLEMO M.		GRADE 1ST LT	DATE 11 JUN 71
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 24' STANDARD FLAT	
PARACHUTE PART NR		SPECIAL ACCESS NO PERSONNEL OTHER FOR OFFICIAL USE ONLY STAT	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA	
RESERVE PARACHUTE DATA		DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS
Exit the airplane at 125 kts Took APPROX 2 sec AND Pulled. After out AND OPEN I RELEASED THE BLINES AND THE SURVIVAL KIT. I CONCENTRATED ON THE FRONT RISERS SPECIALLY THE RIGHT FRONT. THE CANOPY IS SLOW TO REACT AND IT TAKES ABOUT 18-25 SEC. ^{SUSPENDED CONTENTS - KSKI} for a 360° TURN. THE WIND WAS MAKING THE KIT ^{slow} oscillated AND THE CANOPY HAD A CONSTANT ^{slow} TURN TO THE LEFT. OPENING SHOCK WAS LIGHT AND THE RATE OF DESCENT WAS SLOW. MAKING CONSTANT TURNS MAKES YOU TIRED FAST AND TAKES A LOT OUT OF YOU.

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SIGNATURE

Guillermo M. Alexander

AFFTC

FORM
MAY 69

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

REPLACES 6811TH TEST GROUP (F) FORM 23, 4 FEB 67, WHICH IS OBSOLETE.

INDIVIDUAL LIVE JUMP REPORT		DATE
LAST NAME - FIRST NAME - MIDDLE INITIAL		2 JUL 71
GRADE		SERIAL NUMBER
ALEXANDER GUILLERMO M 1st LT		SPECIAL ACCESS REQUIRED
PARACHUTE TYPE		STAT
<input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		<input type="checkbox"/> 25' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER
PARACHUTE PART NR		FOR OFFICIAL USE ONLY
UNUSUAL OCCURRENCE		MAIN CANOPY DATA
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DAMAGE
RESERVE PARACHUTE DATA		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY
USED		TWIST IN LINES
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____
UNUSUAL OCCURRENCE		SEMI-INVERSION
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		SQUIDDING CANOPY
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		COMPLETE INVERSION
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		INJURIES
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
REMARKS		
<p>Left the aircraft at 10,000 feet took a 2-3 sec delay and deployed my main. I checked the canopy and then released the survival kit. It was harder to turn with the pressure suit, but 360° turns in less than 30 sec are still possible.</p> <p>It one plays with the canopy at altitude, when you get to the ground you are too tired to do very much, I think turning should be done only when you get close to the ground and you are trying to avoid something.</p>		
<div style="text-align: right;"> <div style="border: 1px solid black; padding: 5px; transform: rotate(-15deg); display: inline-block;"> SPECIAL ACCESS REQUIRED SENIOR CROWN PROGRAM </div> <div style="border: 1px solid black; padding: 5px; transform: rotate(-15deg); display: inline-block; margin-top: 10px;"> FOR OFFICIAL USE ONLY </div> </div>		
1 This space is to be used to explain any unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.		SIGNATURE Guillermo Alexander

SP-1811

Page 23

INDIVIDUAL LIVE JUMP REPORT		DATE	STAT
1ST NAME - FIRST NAME - MIDDLE INITIAL		8 JUL 71	
GRADE		SERIAL NUMBER	
ALEXANDER GUILLERMO M		1ST LT	
PARACHUTE TYPE		MAIN CANOPY TYPE	
<input checked="" type="checkbox"/> BACK <input type="checkbox"/> CHEST <input type="checkbox"/> SEAT <input type="checkbox"/> TROOP		<input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 24' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input checked="" type="checkbox"/> SPECIAL ACCESS REQUIRED <input checked="" type="checkbox"/> SENIOR CROWN PROGRAM	
PARACHUTE PART NR		MAIN CANOPY DATA	
UNUSUAL OCCURRENCE		DAMAGE	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> LIGHT <input type="checkbox"/> MEDIUM <input type="checkbox"/> HEAVY	
RESERVE PARACHUTE DATA		TWIST IN LINES	
USED		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
UNUSUAL OCCURRENCE		SEMI-INVERSION	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		SQUOING CANOPY	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		COMPLETE INVERSION	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		INJURIES	
		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

The jump was made with a full pressure suit and no survival kit. Exit altitude was 10,000 ft. After I left the C-130 I took about 2 sec and deployed the main canopy, after checking the canopy I released the 6 lines and during descent made several 360° turns. The more turns I made the harder it was to fly the riser. The time for a 360° turn was approx 30 sec. It was a lot less work to make turns without the survival kit.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

FOR OFFICIAL USE ONLY

SIGNATURE

Guillermo M. Alexander

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

INDIVIDUAL LIVE JUMP REPORT

DATE

SERIAL NUMBER

LAST NAME - FIRST NAME - MIDDLE INITIAL

GRADE

PARACHUTE TYPE

☒ BACK☐ SEAT☐ CHEST☐ TROOP

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☐ YES☒ NO

RESERVE PARACHUTE DATA

USED

☐ YES☐ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

MAIN CANOPY TYPE

☐ 28' STANDARD FLAT☐ 30' PERSONNEL☐ 24' STANDARD FLAT☐ OTHER

STAT

☒ T-10

FOR OFFICIAL USE ONLY

MAIN CANOPY DATA

DAMAGE

☐ NONE☐ MEDIUM☐ LIGHT☐ HEAVY

TWIST IN LINES

☐ YES☐ NONR OF FULL TWISTS 2

SEMI-INVERSION

☐ YES☒ NO

COMPLETE INVERSION

☐ YES☒ NO

SQUIDDING CANOPY

☐ YES☒ NO

INJURIES

☐ YES☒ NO

REMARKS

ON ALL RISE TURNS, PULLED CONNECTOR LINKS TO CHIN LEVEL.

1. NO RELEASE LINES, NO KIT RELEASE. TAILED PULLING ^{FT FRONT} _{YISER} 30 SEC, NO TURNING.
2. KIT RELEASED; NO LINES RELEASED, PULLED IT FRONT RISER, 360° TURN IN ^{ARCH} _{IN} 60 SEC. BELIEVE KRAFT NOTED AS SAIL TO HELP TURN
3. KIT RELEASED, 3 LINE RELEASE. EFFECT SAME AS (2)
4. KIT RELEASED, 6 LINE RELEASE. PULLING BACK RISERS HAD LITTLE EFFECT. PULLING FRONT RISER PRODUCED 360° TURN IN APPROX 25 SEC. SAME EFFECT BOTH DIRECTIONS. CANOPY HELD LEADING WELL. EXTREMELY TIRING PULLING RISERS. RECOMMEND PILOT TO WAIT UNTIL 200-300 FT. ABOVE GROUND. BEFORE USING.

SPECIAL AGENT IN CHARGE
SENIOR GROUND PROGRAM

FOR OFFICIAL USE ONLY

1 This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

James Nye

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

INDIVIDUAL JUMP REPORT

DATE

11 June 71

LAST NAME • FIRST NAME • MIDDLE INITIAL <i>Nyc James W</i>		GRADE <i>Capt</i>	SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 26' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input checked="" type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT	
PARACHUTE PART NR		STAT	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input type="checkbox"/> NO		FOR OFFICIAL USE ONLY	
RESERVE PARACHUTE DATA		MAIN CANOPY DATA	
USED <input type="checkbox"/> YES <input type="checkbox"/> NO		DAMAGE <input type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input type="checkbox"/> NO NR OF FULL TWISTS _____	
		COMPLETE INVERSION <input type="checkbox"/> YES <input type="checkbox"/> NO	
		INJURIES <input type="checkbox"/> YES <input type="checkbox"/> NO	

REMARKS

CONNECTOR LINKS PULLED TO CHAIN LEVEL TO INITIATE TURNS ONLY effective turns were accomplished using front risers. UNSTABLE ON OPENING. Some damage to couple of panels. Canopy very stable. Little oscillation, both before and after 6 hangers loose. Canopy has very little tendency to turn without pulling on risers. IT required about 20 sec to make a 360° Turn by pulling on a front riser. I used the rite front for most of the turns. Making a lot of turns is extremely tiring. Would recommend a pilot to wait until he is 200-300 ft before making turns. Also pilot should free in wind on landing. ~~Let handling but acts no smoother~~
Received bruises, on both jumps, under left arm near arm pit.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

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This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

James W Nyc

AFPTC

FORM
MAY 69

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

INDIVIDUAL LIVE JUMP REPORT		DATE
ST NAME - FIRST NAME - MIDDLE INITIAL <i>NIE JAMES W</i>		<i>8 July 71</i>
GRADE <i>CAPT</i>		SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP	MAIN CANOPY TYPE <input type="checkbox"/> 25' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER	
PARACHUTE PART NR UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	STAT MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	TWIST IN LINES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
	COMPLETE INVERSION <input type="checkbox"/> YES <input type="checkbox"/> NO	
	SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
	INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
REMARKS <i>FULL PRESSURE SUIT NO. SCAT KIT.</i> <p>All turns were accomplished by pulling one of the front risers connector links down to chin level. Turns could be accomplished in 25 seconds (360°),</p> <p>There is more pressure on the risers of this canopy than a C-0. As a result it is more tiring making turns. The canopy holds xxxxxx does not have a tendency to turn unless the front risers are pulled. That is it holds a heading well.</p> <p>The pressure suit did not present a problem. It was a little more difficult to see because of the helmet, but the canopy can easily be checked by pushing back against the risers.</p>		
SIGNATURE <i>James Nye</i>		FOR OFFICIAL USE ONLY

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

LAST NAME • FIRST NAME • MIDDLE INITIAL <i>Sallee, Jettie L</i>		GRADE SENIOR CROWN PROGRAM	SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 25' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER	
PARACHUTE PART NR		STAT	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA	
RESERVE PARACHUTE DATA		DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO NR OF FULL TWISTS <u>3</u>	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

The rear risers have Little Turning Ability. Pulling one of The Front Risers will produce a 180° Turn in approx. 15-18 seconds. Pulling one rear riser will produce a Slight Turn but will result in Total Exhaustion if held long enough to produce the Turn. The 6 line release produces a Slight Forward drift. (approx. 4 knots). Landing was normal. The Risers are hard to pull down and hold. No Oscillations were Observed.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

[Signature]

AFPTC

FORM
MAY 55

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

REPLACES 6511TH TEST GROUP (P) FORM 23, 4 FEB 57, WHICH IS OBSOLETE.

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

LAST NAME - FIRST NAME - MIDDLE INITIAL <i>Se... J... L...</i>		GRADE <i>S.S.</i>	SERIAL NUMBER
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 20' PERSONNEL <input type="checkbox"/> 24' STANDARD FLAT <input type="checkbox"/> OTHER	
PARACHUTE PART NR		STAT	
UNUSUAL OCCURRENCE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		FOR OFFICIAL USE ONLY	
RESERVE PARACHUTE DATA		MAIN CANOPY DATA	
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY	
UNUSUAL OCCURRENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TWIST IN LINES <input type="checkbox"/> YES <input type="checkbox"/> NO NR OF FULL TWISTS <i>3</i>	
		SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
REMARKS <i>Ramp Exit C-130 - 110 knots - 10,000 ft</i> <i>Normal opening shock. Released pit and attempted turn. Very little turning ability was observed. Released 3 lines using a real slow steady pull. Release worked ok. Turning was real slow. Released the remaining 3-lines using the same procedure. Release worked ok.</i> <i>Turning is exhausting. Using the front riser a 360° turn can be accomplished in approx. 25-30 sec. Rear risers have very little turning ability. Forward Drift is approx. 3-4 knots. Landing was normal.</i>			
SPECIAL ACCESS REQUIRED SENIOR CROWN PROGRAM			
FOR OFFICIAL USE ONLY			
1 This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.		SIGNATURE <i>J. T. L. L.</i>	

AFTC

FORM
MAY 55

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

L-0-16

REPLACES 6811TH TEST GROUP (P) FORM 23, 4 FEB 57, WHICH IS OBSOLETE.

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

INDIVIDUAL LIVE JUMP REPORT

SPECIAL ACCESS REQUIRED

DATE

30 June 71

SERIAL NUMBER

LAST NAME - FIRST NAME - MIDDLE INITIAL

SENIOR

GRADE IN PROGRAM

PARACHUTE TYPE

☒ BACK☐ SEAT☐ CHEST☐ TROOP

MAIN CANOPY TYPE

☐ 28' STANDARD FLAT☐ 30' PERSONNEL☐ 24' STANDARD FLAT☒ OTHER

STAT

☐ T-10

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☐ YES☒ NO

RESERVE PARACHUTE DATA

USED

☐ YES☒ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

MAIN CANOPY DATA

DAMAGE

☐ NONE☐ MEDIUM☒ LIGHT☐ HEAVY

SEMI-INVERSION

☐ YES☒ NO

SQUIDDING CANOPY

☐ YES☒ NO

TWIST IN LINES

☒ YES☐ NO

NR OF FULL TWISTS 2

COMPLETE INVERSION

☐ YES☒ NO

INJURIES

☐ YES☒ NO

REMARKS

Romp Exit C-130, 125 knots, 10,000 ft.

Normal opening. Small Tear in rear of Canopy. Released 6 lines. Pulling Right Front riser ^{connector} down to eye level and Holding produced a 360° Turn in approx. 25 sec. Pulling Left riser connector down to eye level produced a 360° Turn in approx 30 sec. On one Turn To the left, The Turn came in steps of approx. 30°. This was only noticed on one Turn. The canopy was constantly Trying To turn Left. Released Seat Kit at 4000 ft. Turning Ability is Decreased with Kit released.

SPECIAL ACCESS REQUIRED

(Cover)

This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

AFFTC

FORM MAY 66

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

REPLACES 651TH TEST GROUP (P) FORM 23, 4 FEB 67, WHICH IS OBSOLETE.

If Kit + Roft are swinging in a
clockwise Direction it makes a Left Turn
extremely Difficult. With The Kit and Roft
Swinging Counter-Clockwise a Left Turn can
be made in approx. 30 sec.

Landing with pressure suit is slightly
harder than with no pressure suit. Landing
is still Comfortable.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

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FOR OFFICIAL USE ONLY

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

SP-1811

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INDIVIDUAL LIVE JUMP REPORT

SPECIAL ACCESS REQUIRED

DATE

2 July 71

LAST NAME - FIRST NAME - MIDDLE INITIAL

Jallee, Jettie L

FOR OFFICIAL USE ONLY

SSgt

SERIAL NUMBER

PARACHUTE TYPE

☒ BACK☐ SEAT☐ CHEST☐ TROOP

MAIN CANOPY TYPE

☐ 28' STANDARD FLAT☐ 30' PERSONNEL☐ T-10☐ 24' STANDARD FLAT☒ OTHER

STAT

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☐ YES☒ NO

RESERVE PARACHUTE DATA

USED

☐ YES☒ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

MAIN CANOPY DATA

DAMAGE

☒ NONE☐ MEDIUM☐ LIGHT☐ HEAVY

TWIST IN LINES

☐ YES☒ NO

NR OF FULL TWISTS

SEMI-INVERSION

☐ YES☒ NO

COMPLETE INVERSION

☐ YES☒ NO

SQUIDDING CANOPY

☐ YES☒ NO

INJURIES

☐ YES☒ NO

REMARKS

Ramp Exit C-130 - 125 Knots - 10,000ft.

Stepped off ramp and went unstable. Opening Shock was extremely light.

Made a 6 line Release and Timed Several 360° Turns. The 360° Turns were completed in approx. 30 sec. ea. (L+R.) The fastest ^(360°) turn was to the left which was completed in just under 25 sec.

AT 4000 ft. I attempted to release my kit. The kit released on the left side only. I pushed on the kit twice to get it to release. When the kit released it dropped free and fell to the ground with the raft inflated.

FOR OFFICIAL USE ONLY

SPECIAL ACCESS REQUIRED

1 This space to be used to explain all unusual occurrences, etc. NEGATIVE REPORT IS REQUIRED.

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

Oscillations seemed to be larger without
the kit below.

Turning ^{ONLY} ~~was~~ quicker with no kit.

I had a small oscillation on landing

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

FOR OFFICIAL USE ONLY

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

DATE 20 July 1971

LAST NAME - FIRST NAME - MIDDLE INITIAL Brown, Herbert R.		GRADE 1st Lt	SERIAL NUMBER [REDACTED]	STAT
PARACHUTE TYPE <input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		MAIN CANOPY TYPE <input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER (SR-71) SENIOR CROWN PROGRAM FOR OFFICIAL USE ONLY		
PARACHUTE PART NR UNUSUAL OCCURRENCE <input checked="" type="checkbox"/> YES Survival kit did not deploy <input type="checkbox"/> NO RESERVE PARACHUTE DATA USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		MAIN CANOPY DATA DAMAGE <input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY NR OF FULL TWISTS _____ SEMI-INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO COMPLETE INVERSION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SQUIDDING CANOPY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO INJURIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

REMARKS

I exited the aircraft in an airborne position. The ripcord was pulled approximately 3 seconds after exit. The parachute opening shock was mild. The 6 suspension lines were released approximately 20 seconds after exit. I was able to turn the canopy through 360 degrees in approximately 35 seconds. To continually work the canopy requires a great deal of physical effort on the jumper's part. The survival kit actuation handle was pulled at approximately 4,000 ft altitude. The left side of the kit released but the right hand side remained attached. From 4,000 to 1,000 ft I attempted to jar the kit loose. At approximately 1,000 ft, I released the kit attaching hardware from the parachute harness and held the kit in my hand. At approximately 10 to 20 ft above ground I attempted to toss the kit away from me. I did not toss the kit far enough and was forced to land on it in a sitting position. I received no injuries as a result of the jump or landing.

SPECIAL ACCESS REQUIRED
 SENIOR CROWN PROGRAM
 FOR OFFICIAL USE ONLY

This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

Herbert R. Brown

SP-1811

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INDIVIDUAL LIVE JUMP REPORT		ACCESS REQUIRED SENIOR CROWN PROGRAM		DATE	8 July 1971
ST NAME - FIRST NAME - MIDDLE INITIAL		GRADE		SERIAL NUMBER	
BROWN, HERBERT R.		1st Lt		STAT	
PARACHUTE TYPE		MAIN CANOPY TYPE			
<input checked="" type="checkbox"/> BACK <input type="checkbox"/> SEAT <input type="checkbox"/> CHEST <input type="checkbox"/> TROOP		<input type="checkbox"/> 28' STANDARD FLAT <input type="checkbox"/> 30' PERSONNEL <input type="checkbox"/> T-10 <input type="checkbox"/> 24' STANDARD FLAT <input checked="" type="checkbox"/> OTHER SR-71			
PARACHUTE PART NR		MAIN CANOPY DATA			
UNUSUAL OCCURRENCE		DAMAGE		TWIST IN LINES	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> HEAVY		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NR OF FULL TWISTS _____	
RESERVE PARACHUTE DATA		SEMI-INVERSION		COMPLETE INVERSION	
USED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
UNUSUAL OCCURRENCE		SQUIDDING CANOPY		INJURIES	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

REMARKS

I exited the C-130 aircraft from the ramp in a stable position. The suspension lines were released just after the canopy achieved a stable full open condition. Several 360 degree turns were accomplished with a time duration varying from 20 to 35 seconds. I found the canopy easier to turn during this test (without survival kit) than during a previous test with an undeployed survival kit.

SPECIAL ACCESS REQUIRED
SENIOR CROWN PROGRAM

FOR OFFICIAL USE ONLY

Herbert R. Brown

Approved For Release 2002/11/08 : CIA-RDP75B00285R000100080012-0

DATE

SERIAL NUMBER

LAST NAME - FIRST NAME - MIDDLE INITIAL

GRADE

SPECIAL ACC
SEMPER CROV

PARACHUTE TYPE

MAIN CANOPY TYPE

STAT

☒ BACK☐ SEAT☐ 28' STANDARD FLAT☐ 30' PERSONNEL☐ T-10☐ CHEST☐ TROOP☐ 24' STANDARD FLAT

FOR OFFICIAL USE ONLY

PARACHUTE PART NR

UNUSUAL OCCURRENCE

☒ YES☐ NO

MAIN CANOPY DATA

DAMAGE

☒ NONE☐ MEDIUM☐ LIGHT☐ HEAVY

TWIST IN LINES

☐ YES☒ NO

NR OF FULL TWISTS

RESERVE PARACHUTE DATA

USED

☐ YES☒ NO

SEMI-INVERSION

☐ YES☒ NO

COMPLETE INVERSION

☐ YES☒ NO

UNUSUAL OCCURRENCE

☐ YES☒ NO

SQUIDDING CANOPY

☐ YES☒ NO

INJURIES

☐ YES☒ NO

REMARKS

C-130 - 110 KTS - Ramp exit 10,000 FT.

I stopped off the ramp backwards facing line of flight and fell stable for approx 3 sec. Then I pulled the ripcord with my right hand and the parachute deployed and opened without any noticeable opening shock.

AFTER full opening I tried to turn the canopy by pulling down the right front riser. This caused slight oscillation and no canopy turn. Then I released the SIK line to turn by pulling down on both laydowns simultaneously. Then I released the seat kit by pulling the handle on the right side. As the kit fell away the handle stayed attached to it. So I raised the kit.

This space to be used to explain all unusual occurrences, injuries, etc. NEGATIVE REPORT IS REQUIRED.

SIGNATURE

REMOVAL PROGRAM

up to the front

Worked the handle free, then ~~it~~ ^{it} slipped the kit

And it fell to the end of the retention line.

I then tried to turn the canopy by pulling on the right rear riser. After holding, the riser down to where the connector link was even with my fore head for 30 sec I had made ~~it~~ about a 10° turn. By this time my arms were tired and I released the riser, the canopy turned back to its original handling. After resting for a few seconds I tried turning by pulling on the front risers. By pulling the ^{right} ~~front~~ front riser it took 15-18 sec for a 180° turn. Using the left front riser was about 3-5 sec faster.

Decent and landing were normal.

I don't feel any ~~benefit~~ benefit can be derived by using the rear risers for therapy. Even using the front risers a man would be extremely tired trying to make a complete canopy turn.

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REFERENCES

SP-1650 Report, "SR-71 Personnel Parachute Descent Control"

T.O. 14D1-2-81, "Four Line Release"

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DEPARTMENT OF THE AIR FORCE
DETACHMENT 51 HQ SMAMA (AFLC)
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REPLY TO
ATTN OF

ME

FEB 8 1972

SUBJECT

Modified MC-1 Personnel Parachute

SAC(LGMR/Major J. Janis)

1. On 18 December 1969, an incident occurred during a test flight of an SR-71 aircraft which resulted in crew bail-out. The parachute descent ended in a near mishap to crew members on landing as indicated in the accident board investigation:

a. "There was considerable oscillation after release of the seat kit...The landing was in a marginal area, in a rock pile, and I hit backwards and was immediately knocked back over onto my head and the chute fell over a cliff. My concern was that it was going to billow and drag me over the cliff and it appeared to be 150-200 feet down; however, the chute did not blossom..."

b. "In the drogue chute, I was trying to keep my seat oriented toward the Pilot...Once I got the chute, it was very difficult to turn the chute to look at him. I could pull down the riser and rotate the chute to where I was looking at him; however, as soon as I would let go it would rotate back and I would be facing primarily in a southern direction... I hit approximately six feet from a ravine. My chute canopy went over the bank of the ravine. The chute collapsed immediately before I could activate the quick releases...had the canopy remained open and had there been any surface wind, I'm sure it would have pulled me into the ravine. The ravine was approximately 40 to 50 feet deep with fairly steep sides".

2. Because of the problems incurred, the Accident Investigation Board recommended that a four-line release be incorporated into the SR-71 personnel parachute to enhance control of these chutes and reduce oscillations.

3. ADP was requested to accomplish an Engineering Study and they recommended a six-line release rather than a four-line release modification to the MC-1 parachute, because of its larger size.

4. The parachute tests were performed at the Naval Test Center, El Centro, California. They included whirl tower tests at 175, 225, and 250 knots in addition to nine live jumps in "shirt-sleeve" environment and nine live jumps in full pressure suits.

5. The Jump Tests revealed:

a. The modified MC-1 parachute is very stable.

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b. The six-line release provided a slight turning improvement but actuation was difficult and tiring. Turns of 360° required 25-40 seconds to complete. Line release also induced a three to four knot forward speed; the desirability of this feature would vary with jump conditions, such as a 10 to 15 knot wind.

c. Turns with the seat kit and raft released were more difficult to accomplish. The suspended survival kits made damping of crewmember oscillation more difficult.

d. Pressure suits did not present a problem in descent activity.

7. The test results have indicated that there is some merit to the six-line release modification. There is considerable doubt, however, that the parachute control exercised by test personnel would be utilized by crewmembers in an emergency situation. Test jumps were made with much preparation and full awareness of descent conditions, factors not usually available to crewmembers. Test personnel accomplished a variety of control maneuvers not expected of crewmembers.

8. ASPO engineering feels that the presently designed chute provides the optimum chances for survival under all circumstances and does not feel the proposed modifications to resolve speculation on possible adverse conditions will enhance the effectiveness of the existing system. We concur with the analysis and advice of the El Centro Parachute Test Center personnel and recommend that the modification not be accomplished.

FOR THE COMMANDER

William Marscher

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